

Description of a New Subspecies of *Charaxes jahlusa* Trimen (Lep.: Nymphalidae) from Southern Africa

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Abstract

The relationships between the southern races of *Charaxes jahlusa* Trimen are discussed and a new subspecies is described with notes on its early stages and habits.

Introduction

Charaxes jahlusa from the Transvaal and adjacent areas was treated by van Someren (1974) as an intermediate form between nominate *jahlusa* and subspecies *argynnides*. However, examination of further material has revealed that the Transvaal insect differs from both *jahlusa* and *argynnides* in being larger with a reduction of the black markings on the upperside and with more extensive buffish-orange on the underside. In reality *jahlusa* and *argynnides* are closer to each other than to the Transvaal subspecies. The Natal members of the species are nearer to *argynnides* than either *jahlusa* or the Transvaal race. It is possible that the Natal *jahlusa* connects up with *argynnides* by following the coastal bush through southern Mozambique and meeting with *argynnides* in the region of the Zambesi River. The inland subspecies occupies the higher and drier bushveld areas of the Transvaal, southern Rhodesia and Botswana.

Charaxes jahlusa rex subsp. nov.

Diagnosis

Forewing length, male $28,8 \pm 1,8$ mm. *Upperside*: ground colour more orange than *jahlusa*, being similar to that of *argynnides*. This is the only subspecies in which the postdiscal spots are restricted to 6 and 7, while in the others they are found in areas 4 to 7. Other black markings on the upperside are less well developed than those in other subspecies. *Underside*: forewing lacks the silvery subapical costal mark found in *jahlusa* and *argynnides*. Hindwing basal area darker than *jahlusa* and more orange than *argynnides*. Tails generally longer and more slender.

Forewing length, female $33,4 \pm 3,2$ mm. *Upperside*: more orange than either *jahlusa* or *argynnides*. Postdiscal black spots absent, or if present, only faintly indicated in areas 6 and 7. *Underside*: ground colour differs from other subspecies in being orange-buff with the black markings reduced. Hindwing white spots slightly larger than those of *argynnides*.

Description of Male Holotype

Forewing length 28,4 mm.; antenna-wing ratio 0,45. *Head*: Frontoclypeal region thickly covered with brownish-grey hairs; epicranial region thickly covered with orange hairs. There is

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a patch of white scales anterior and posterior to each antennal base. Compound eye is ringed posteriorly with white scales. Labial palps medio-dorsally orange, dorsolaterally black, ventrolaterally creamy-white. Antennae black, proboscis ochre. *Thorax*: Dark brown covered with orange hairs and scales dorsally; laterally dark brown with white patches and ventrally with dense creamy-white hairs. *Legs*: Femur dorsally black, otherwise legs whitish-ochre. *Abdomen*: orange-brown dorsally becoming dark brown ventrally. *Wings*: Forewing shape, costa slightly curved, apex produced, enhanced by the strong concavity on the outer margin of the wing in region 3-5 and the prominent hind angle in 1a-1b. *Upperside*: Ground colour brownish-orange shading to orange-ochre on the inner fold of the hindwing. Pattern of the forewing black spots arranged as follows: a small black dot basally in cell, followed by a curved mark at about mid-point and black patch at its end; two smallish spots in the sub-bases of 1b and 2, a series of more linear marks in the discal line becoming only a small dot in 1b; in the post-discal line are two squarish marks in areas 6 and 7; submargin brownish-black with the margin brownish-orange broken by brownish-black along the veins. Hindwing costal area paler than the rest of the wing, with a small black spot in the subcosta and below this a large double mark in area 7. Some of the paratypes have a spot just distad to the junction of veins 6 and 7 which is faintly indicated in the holotype. Submarginal border black with orange marks in areas 1c to 4; margin brownish-orange. Tail on vein 2 is 4,4 mm long, and on vein 4 is 2,5 mm. *Underside*: Forewing ground colour orange-buff along the base of the costa and beyond cell, shading into the pinkish-orange of the rest of the wing. There is a black mark at base of cell, otherwise black markings as on upperside. Submarginal line black only in areas 1b and 2, otherwise ochre-orange. Hindwing ground colour orange-buff, being slightly darker basally. Large silvery white spot margined with black sub-basally in 5 and a larger one sub-medially in 4. The discal silvery-white band well developed. Submarginal row of blackish-brown spots margined with pale blue and with a pinkish-white mark in the centre. Margin of wing orange-buff.

Description of Female Allotype

Forewing length 36,5 mm.; antenna-wing ratio 0,37. *Head*: Frontoclypeal region thickly covered with brownish-grey hairs; epicranial region covered with orange-ochre hairs. There is a patch of white scales anterior and posterior to each antennal base. Compound eye ringed posteriorly with white scales. Labial palps medio-dorsally ochre, dorsolaterally greyish-brown, ventrally buffish-white. Antennae black, proboscis

PLATE 1 (facing page 212). Uppersides

1. *Charaxes jahlusa jahlusa* ♂ (Cape). 2. *Charaxes jahlusa* near *argynnides* ♂ (Natal). 3. *Charaxes jahlusa rex* ♂ — Holotype (Transvaal). 4. *Charaxes jahlusa argynnides* ♂ (Mozambique). 5. *Charaxes jahlusa argynnides* ♂ (Malawi). 6. *Charaxes jahlusa argynnides* ♂ (Zambia).



1



2



3



4



5



6



1



2



3



4



5



6

ochre. *Thorax*: Dark brown covered with orange-ochre hairs and scales dorsally, laterally greyish-brown with white patches and ventrally with dense yellowish-white hairs. *Legs*: Femur dorsally blackish-brown, otherwise greyish-white. *Abdomen*: Orange-buff dorsally, becoming blackish-brown ventrally. *Wings*: Both wings differ in shape from those of the male, the forewing is less falcate, while the hindwing is more rounded and less pointed at the anal angle. *Upperside*: Ground colour tawny-orange; the dark spotting of the forewing, arranged as in the holotype but better developed. Postdiscal dark marks present only as faint scaling in area 7. Marginal and submarginal areas as in the holotype. Hindwing dark spotting as in holotype but with medial spots also in areas 4 and 5. Submarginal border black with ochre markings in areas 1c to 7; margin tawny-orange. Tail on vein 2 is 4,5 mm. long and on vein 4 is 5 mm. *Underside*: Forewing paler than holotype and the dark spotting similar. The hindwing ground colour paler than in male, but the markings are the same.

♂ HOLOTYPE: Bred from a larva collected by G. A. Henning on *Pappea capensis* Eckl. & Zehr at the Saltpan, Vivo, Transvaal, emerged 29.vi.1973; in Transvaal Museum, Pretoria.

♀ ALLOTYPE: Saltpan, Vivo, Transvaal, 15.xi.1972, S. F. Henning; in Transvaal Museum, Pretoria.

PARATYPES: All collected at Saltpan, Vivo, Transvaal on the following dates by the Hennings: 2 ♂♂, 4 ♀♀, 4-6.iv.1965; 2 ♀♀, 17.ii.1969; 2 ♀♀, 2.ix.1969; 1 ♀, 5.ix.1971; 2 ♀♀, 12.iv.1972; 1 ♂, 1 ♀, 2.ix.1972; 1 ♂, 15.ix.1972; 3 ♂♂, 6-8.iv.1973; bred 2 ♂♂, 1 ♀, emerged 27.vi-9.vii.1973 and 1 ♂ emerged 1.ix.1973. By I. Bampton: 8 ♂♂, 5 ♀♀, 7-9.vi.1977. By G. van Son: 1 ♀, 11.vii.1954. R. Badham: 5 ♂♂, 27.iv.1952. Paratypes are in the British Museum (Natural History), the Transvaal Museum, Pretoria and in collections of W. H. Henning and sons, Dr. V. Allard, S. C. Collins, J. Plantrou and B. Turlin.

Numerous other specimens from a number of other localities in the Transvaal, Rhodesia and Botswana were examined during the course of this study but only the specimens taken at the type-locality, i.e. the Saltpan, Vivo, Transvaal, were designated as paratypes.

Biology

Foodplant: *Pappea capensis* Eckl. & Zeyh. (SAPINDACEAE) and *Dalbergia melanoxylon* Guill. & Perr. (LEGUMINOSAE). The latter is probably an alternative foodplant in Southern Africa.

Egg: Oval, about 1,0 mm. in diameter, with a fluted depression on the top. It is green when first laid and develops

PLATE 2 (facing page 213). Undersides

1. *Charaxes jahlusa jahlusa* ♂ (Cape). 2. *Charaxes jahlusa* near *argynnides* ♂ (Natal). 3. *Charaxes jahlusa rex* ♂ — Holotype (Transvaal). 4. *Charaxes jahlusa argynnides* ♂ (Mozambique). 5. *Charaxes jahlusa argynnides* ♂ (Malawi). 6. *Charaxes jahlusa argynnides* ♂ (Zambia).